REMARKS

Claims 1-33 were previously pending in this patent application. Claims 1-33 stand rejected. Herein, Claims 1, 15, 18, 21-24, 26, and 29-32 has been amended. Accordingly, after this Amendment and Response After Final Action, Claims 1-33 remain pending in this patent application. Further examination and reconsideration in view of the claims, remarks, and arguments set forth below is respectfully requested.

35 U.S.C. Section 101 Rejections

Claims 1-14 stand rejected under 35 U.S.C. Section 101 for being directed to non-statutory subject matter. Moreover, MPEP 2106 is cited as providing the requirements for a claimed computer-related process to be statutory. However, MPEP 2106 clearly states that it does not constitute substantive rulemaking and hence it does not have the force and effect of law. Thus, it is improper to rely on subject matter of MPEP 2106 that does not have the force and effect of law to determine whether a claimed computer-related process is statutory.

In particular, it is stated on page 3 of the Final Office Action that, to be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application within the technological arts. [MPEP 2106 IV B 2 (b)]. Also, the statute 35 U.S.C. 201(f) is utilized to define the terms "practical application".

The non-statutory subject matter discussion on pages 3 and 4 of the Final Office Action is not supported by patent requirements that actually have the force and effect of law. First, the Board of Patent Appeals and Interferences issued a decision (Ex parte Carl A. Lundgren) in 2005 establishing that there is no judicially recognized separate "technological arts" test to determine patent eligible subject matter under 35 U.S.C. 101. This decision (Ex parte Carl A. Lundgren) is attached to this paper. Secondly, 35 U.S.C. 201 states that 35 U.S.C. 201(f) provides a definition for "practical application" to be used only in Chapter 18 (Patent Rights in Inventions Made with Federal Assistance) of the Patent Laws. Since 35 U.S.C. Section 101 is in Chapter 10 (Patentability of Inventions) of the Patent Laws, the definition for "practical application" of 35 U.S.C. 201(f) is not applicable. Thirdly, the Supreme Court has acknowledged that Congress intended 35 U.S.C. Section 101 to extend to anything under the sun that is made by man, that falls within one of the four stated categories of statutory subject matter, and that is not a law of nature, natural phenomena, or an abstract idea. It was not contended in the Final Office Action that Claims 1-14 fell outside one of the four stated categories of statutory subject matter or that the subject matter of Claims 1-14 was directed to laws of nature, natural phenomena, or abstract ideas.

Finally, the U.S. Federal Circuit Court of Appeals has ruled (State Street v. Signature, 149 F. 3d 1368, (Fed. Cir. 1998)) that regardless of the statutory category in which the invention subject matter falls, the invention subject matter is statutory if it produces a useful, concrete, and tangible result. Examples of useful, concrete, and tangible results include producing a final share price after a series of mathematical calculations (State Street) and producing a smooth waveform that is displayed after a series of mathematical calculations (In re

Alappat, 33 F. 3d 1526, (Fed. Cir. 1994)). As amended, Independent Claim 1 recites "using a result of said comparing to identify and to display a first allowed programmable hardware resource of the integrated circuit." Analogous to the Alappat case, Independent Claim 1 produces the useful, concrete, and tangible result "first allowed programmable hardware resource of the integrated circuit" identified and displayed after the comparison step. Claims 2-14 depend from Independent Claim 1.

Therefore, it is respectfully submitted that Claims 1-14 are directed to statutory subject matter under 35 U.S.C. Section 101.

35 U.S.C. Section 102(e) Rejections

Claims 1-7 and 10-14 stand rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al., U.S. Patent No. 6,757,882 (hereafter Chen). These rejections are respectfully traversed.

Independent Claim 1 recites, as amended:

> A computer implemented method of matching a selectable user module with plurality of programmable resources associated with an integrated circuit comprising:
> a. displaying said selectable user module, wherein said user module is a representation of a configuration of a programmable circuit;
> b. in response to a selection of said selectable user module, ***comparing a description*** of a hardware resource requirement of said selectable user module ***with a description*** of said plurality of programmable resources associated with said integrated circuit; and
> c. using a result of said comparing to identify and to display a first allowed programmable hardware resource of the integrated circuit satisfying the hardware resource requirement of said selectable user module. (emphasis added)

It is respectfully asserted that Chen does not disclose the present invention as recited in Independent Claim 1. In particular, Independent Claim 1 recites the limitation, "***comparing a description*** of a hardware resource requirement of said selectable user module ***with a description*** of said plurality of programmable resources associated with said integrated circuit," (emphasis added). In contrast, Chen is directed to efficiently selecting and employing the IP of IP packages (206). [Chen; Col. 4, lines 1-4]. The IP package (206) includes package description (210) and its constituting parts (220), wherein the package description (210) includes basic description (212) providing basic information about the IP of the IP package (206) and includes pins and bus related descriptions (214) providing physical and logical pin descriptions as well as bus implementation and decoding information to discern bus compatibility and connectivity for the IP of the IP package (206). [Chen; Figure 2; Col. 4, lines 11-29].

In Final Office Action, the element of Chen corresponding to the "selectable user module" of Independent Claim 1 and the elements of Chen corresponding to the "programmable resources associated with an integrated circuit" of Independent Claim 1 are not identified. Moreover, reference is made to Figure 13 of Chen to support the rejection against Independent Claim 1 even though Figure 13 simply illustrates processing the IP package (206), acquiring the IP of the IP package (206), and making the IP of the IP package (206) available for use by a designer (202). [Chen; Figure 13; Col. 9, lines 59-65]. Since Figure 13 shows (in steps 1302, 1308, 1314, and 1318) reading information from the package description (210) of the IP package (206), since Figure 13 shows (in step 1322) reading information from the parts (220) of the IP package (206), and since Figure 13 shows (in step 1310) determining the buses

supported by the IP package (206), it is clear that only information related to the IP package (206) is discussed and illustrated in Figure 13 and related text in Columns 9 and 10 of Chen.

Continuing, regardless of whether the IP package (206) is assumed to be the "selectable user module" or the "programmable resources associated with an integrated circuit", Chen still fails to disclose comparing a description of a hardware resource requirement of the "selectable user module" with a description of the plurality of "programmable resources associated with the integrated circuit", as in the invention of Independent Claim 1. Therefore, it is respectfully submitted that Independent Claim 1 is not anticipated by Chen and is in condition for allowance.

Dependent Claims 2-7 and 10-14 are dependent on allowable Independent Claim 1, which is allowable over Chen. Hence, it is respectfully submitted that Dependent Claims 2-7 and 10-14 are patentable over Chen for the reasons discussed above.

Claims 15, 18-24, and 26-32 stand rejected under 35 U.S.C. 102(e) as being anticipated by Cooke et al., U.S. Patent Application Publication No. US2002/0016706 (hereafter Cooke). These rejections are respectfully traversed.

Independent Claim 18 recites, as amended:

> A computer implemented method of determining hardware resources for an electronic design comprising:
> a) ***selecting*** an electronic design represented as a ***user module of predefined functionality***;
> b) accessing a data description of hardware resources required for implementing said user module;

c) accessing data descriptions of a plurality of ***pre-existing programmable hardware resources of an electronic device on which to implement said user module***; and
d) comparing said data description of said user module with said data descriptions of said plurality of pre-existing programmable hardware resources to ***automatically determine potential placement options of said user module on said electronic device, wherein each potential placement option represents one or more of said pre-existing programmable hardware resources selected to implement said user module***. (emphasis added)

It is respectfully asserted that Cooke does not disclose the present invention as recited in Independent Claim 18. In particular, Independent Claim 18 recites the limitations, "***selecting*** an electronic design represented as a ***user module of predefined functionality***," (emphasis added), "accessing data descriptions of a plurality of ***pre-existing programmable hardware resources of an electronic device on which to implement said user module***," (emphasis added), and, "***automatically determine potential placement options of said user module on said electronic device, wherein each potential placement option represents one or more of said pre-existing programmable hardware resources selected to implement said user module***," (emphasis added). In contrast, Cooke is directed to designing an integrated circuit that has no pre-existing programmable hardware resources by starting with hardware description languages to define functional components, proceeding with logic synthesis to convert the functional description into specific circuit implementation, and then proceeding to place and route to produce a physical layout file that is used as a design "blueprint" for fabrication of the integrated circuit. That is, functionality is implemented by defining it with hardware description languages at the start of the design. However, Cooke fails to disclose selecting a user module of predefined functionality and implementing the user module on an electronic device that has a plurality of pre-existing programmable hardware resources, as in the invention of Independent Claim 18.

Moreover, Cooke does not show automatically determining potential placement options of the user module on the electronic device, wherein each potential placement option represents one or more of the pre-existing programmable hardware resources selected to implement the user module, as in the invention of Independent Claim 18. Therefore, it is respectfully submitted that Independent Claim 18 is not anticipated by Cooke and is in condition for allowance.

Dependent Claims 19-24 are dependent on allowable Independent Claim 18, which is allowable over Cooke. Hence, it is respectfully submitted that Dependent Claims 19-24 are patentable over Cooke for the reasons discussed above.

With respect to Independent Claims 15 and 26, it is respectfully submitted that Independent Claims 15 and 26 recite similar limitations as in Independent Claim 18. Therefore, it is respectfully submitted that Independent Claims 15 and 26 are not anticipated by Cooke and are in condition for allowance for reasons discussed above.

Dependent Claims 27-32 are dependent on allowable Independent Claim 26, which is allowable over Cooke. Hence, it is respectfully submitted that Dependent Claims 27-32 are patentable over Cooke for the reasons discussed above.

35 U.S.C. Section 103(a) Rejections

Claims 8 and 9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al., U.S. Patent No. 6,757,882 (hereafter Chen) in view of PSoC Designer: Integrated Development Environment User Guide Revision 1.09 (hereafter Guide 1.09). These rejections are respectfully traversed.

Dependent Claims 8 and 9 are dependent on allowable Independent Claim 1, which is allowable over Chen. Moreover, Guide 1.09 fails to teach, motivate, or suggest the limitations not disclosed by Chen. Hence, it is respectfully submitted that Independent Claim 1 is patentable over the combination of Chen and Guide 1.09 for the reasons discussed above. Since Dependent Claims 8 and 9 depend from Independent Claim 1, it is respectfully submitted that Dependent Claims 8 and 9 are patentable over the combination of Chen and Guide 1.09 for the reasons discussed above.

Claims 16, 17, 25, and 33 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Cooke et al., U.S. Patent Application Publication No. US2002/0016706 (hereafter Cooke). These rejections are respectfully traversed.

Dependent Claims 16 and 17, Dependent Claim 25, and Dependent Claim 33 are dependent on allowable Independent Claims 15, 18, and 26, respectively, which are allowable over Cooke. Hence, it is respectfully submitted that Dependent Claims 16 and 17, Dependent Claim 25, and Dependent Claim 33 are patentable over Cooke for the reasons discussed above.

CONCLUSION

It is respectfully submitted that the above claims, arguments and remarks overcome all rejections and objections. All remaining claims (Claims 1-33) are neither anticipated nor obvious in view of the cited references. For at least the above-presented reasons, it is respectfully submitted that all remaining claims (Claims 1-33) are in condition for allowance.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Please charge any additional fees or apply any credits to our PTO deposit account number: 23-0085.

Respectfully submitted,

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Dated: 5/11/2006

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